

## PATTERNS OF VERBAL COMPLEMENTATION IN THE SPEECH OF A PRE-TWO-YEAR-OLD GIRL\*

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### *ABSTRACT*

This article analyses verb/complement patterns in the speech of a 20-22 month old girl and provides an account of the optionality in the position of the complement by assuming basic proposals of the Minimalist Program (Chomsky, 1992, 1995). A crucial starting point is that the initial state is a reflex of Fundamental Operations made available by UG to the child and that lexical entries are sets of features which are acquired gradually. Ordering constraints are not present in lexical entries nor are morphological features in need to be eliminated. Feature-checking is not activated until 24 months when freedom in word order is lost.

### 1. INTRODUCTION

This article accounts for certain constructions found in the speech of a 20-22 month old girl, Mireia, in the spirit of Roeper's (1996) claim "following Chomsky's theory of economy, it will be productive to assume that the initial state constitutes the set of economical structures generated by UG" (Roeper, 1996: 7). Starting out from the two very basic assumptions that Universal Grammar (UG) is part of the innate endowment of the human mind, and that UG determines the possibilities of structuring linguistic elements from the onset, I appeal to the application of Fundamental Operations (Chomsky, 1995; Roeper, 1996) plus incomplete lexical entries to account for the word order possibilities in verb-internal argument patterns. Fundamental to this account is the notion of Feature-checking, which seems to arise later (as from 23 months) and which determines the loss of freedom of order in child speech.

The data on which this article is based is the speech of my oldest daughter, Mireia, from 20 to 24 months, as recorded in a daily journal and some video-recordings. Most of the examples come from the daily journal which constitutes a much more complete corpus. Deviant constructions were only annotated when produced more than once, as part of the speech possibilities of the child<sup>1</sup>.

The sections of this article are organized as follows: in section 2, the data under analysis are presented together with a general overview of the linguistic characteristics of the two months analysed. Section 2.2 includes comments on the preceding and the following months; section 3 is devoted to the theoretical explanation of the data.

## 2. THE DATA

### 2.1. THE STAGE UNDER ANALYSIS

Mireia's speech from 20 to 22 months shows that there is word order optionality with respect to verb-internal argument position. This optionality develops from a free order (20-22 months) to a fixed, adult-like, order at 23 months (with some exceptions) and at 24 months (with no exceptions). At 20 months Mireia begins to use verbs with complements which she either places before or after the verb, with no special intonation when the pre-verbal option is chosen. The following examples are representative of this optionality:

#### *a) V- Obj*

- (1) Papa treure paper (21)  
daddy to-take-off paper
- (2) Mama treu altra ploma (22)  
mummy take-off-IMP other feather
- (3) Porto a peix (22)  
bring-1s schwa fish
- (4) Agafa barca avi (21)  
take-3s bota grandpa
- (5) Agafo a cullera aquesta petita (21)  
take-1s schwa spoon this little
- (6) Posi guant (20)  
put-SUBJ-3s glove
- (7) Posem aigua aquí (21)  
put-1pl water here

*b) Obj -V*

- (8) Sabates treu/treure (20)  
shoes take-off-IMP/to take off
- (9) Paper treure (21)  
paper to-take-off
- (10) A peix a porto (22)  
schwa fish schwa bring-1s
- (12) Altre agafo (20)  
other take-1s
- (13) Tortuga agafa mama (21)  
turtle take-IMP mummy
- (14) Aigua posi (20)  
water put-SUBJ
- (15) Aigua posem aquí (21)  
water put-3PL here

Note that the use of these structures is not restricted to one verbal form; both finite ((8), (10), (12), (13), (15)) and non-finite ((1), (8), (9)) forms occur with misplaced arguments, and different types of tenses and persons also share the option ((1st person: (10), (12); 3rd plural (15); Imp (8, 13); Subjunctive (14)).

The examples given may indicate that the pattern Obj-V co-occurs with missing external arguments, but we find some instances of both overt external arguments and overt misplaced internal ones:

- (16) Mimi<sup>2</sup> sabates porta no  
Mimi shoes wear-3s no
- (17) Mimi pitet porta  
Mimi bib wear-3s
- (18) Mama pitet posa (21)  
mummy bib put-IMP

Moreover, some of these verbs, and others<sup>3</sup>, occur with unrealized internal arguments, sometimes with both external and internal arguments missing from the constructions and sometimes with only one missing argument:

- (19) Papa agafa (20)  
daddy take-IMP
- (20) Agafat Mimi (21)  
taken Mimi
- (21) Agafat (21)  
taken
- (22) Mama posa (21)  
mummy put-IMP
- (23) Posam (21)  
put-IMP(cl)<sup>4</sup>

Apart from the position patterns observed, there are a few instances of non-adjacent constructions, i.e. these same predicates are used with an overt internal argument which is separated from the predicate which selects it by the external argument:

- (24) Agafa Mimi coses (21)  
take-2sg Mimi things

During these two months, in which the complement patterns are productive and active, there are other salient characteristics in Mireia's speech, some of which could be related to this phenomenon (See section 3).

#### 1. Structures with no predicates

- (25) Mimi vestit no (20)  
Mimi dress no  
(I don't want this dress on)
- (26) Alan sabates no (21)  
Alan shoes no  
(Allan is not wearing shoes)
- (27) Ana pilota no  
Pilota Ana no  
ball Ana no  
(I don't want to lend my ball to Ana)

2. Optionality of position of the negative particle 'no', either preverbally or posverbally: (see examples ((25)-(27)):

- (28) Mimi no sap  
Mimi not know-3s

(29) Balla no  
Dance-3s not

(30) No pesa  
Not Be-heavy-3s  
Pesa no  
Be-heavy-3s no

### 3. Root infinitives (and participles) (also exs. (1), (8), (9))

(31) Sortir aigua no  
To-come-out water no

(32) Papa treballant  
daddy working

### 4. Use of schwa in different contexts (also exs. (3), (5), (10))

(33) a culleres  
a spoons

(34) a pesa molt  
a be-heavy-3s a-lot

(35) a trobat  
a found

(36) a bruta  
a dirty

5. General omission of elements: both thematically relevant (internal arguments ((19)-(23)) and external arguments ((3)-(7) and (8)-(15)), and thematically irrelevant elements (determiners, clitics, auxiliaries, copula): (the items in parentheses correspond to what adults would include):

(37) (Les) sabates (del) papa no (les) mullis (21)  
(the) shoes (of-the) daddy not (them) get-wet

### 6. Misplacement of elements in the nominal domain: (ex. (5))

## 2.2. A GRADUAL DEVELOPMENT: THE PRE AND POST-STAGES

The examples (1)-(15) correspond to productions uttered between 20 to 22 months. The 2 previous months (18-19) were characterized by two-word utterances with the following patterns:

- (38) NOUN + NEG/AFF  
 bibe si/no  
 bottle yes/no
- (39) SCWHA + NOUN  
 a nene  
 scwha children

Months 20-22 are followed by a period of decrease of the patterns, which comes together with an increase in the learning of other lexical items. At 24 months new verbal predicates are learned and never produced with the deviant order (8)-(15). These new lexical items are directly placed in their corresponding adult positions:

- (40) a comprarem un altre biberó  
 scwha will-buy one other bottle
- (41) a meu vaset te forats  
 scwha my little-glass has holes
- (42) ... donarem més nyam nyam  
 will-give more food

At 23 we still find some instances of misplacement, often related to other clausal phenomena. Note that two of the five recorded utterances of Obj-V occur in the context of a question<sup>5</sup>:

- (43) Papa, xaropet porto? (23)  
 daddy, medicine bring-1s?
- (44) Aquí una magdalena megem?(23)  
 here a pastry eat-1pl?

At 23 there is no post-verbal negation, and hardly any missing predicate structure. As mentioned, there are some misplaced structures and some structures with missing internal arguments but there is an increase of structures with neither of these phenomena. At 23 we find imperfect tense emerging ((45), (46)) and at 24 we find future tense being used ((40), (42)). The increase in the number of lexical items makes structures more complex and the overall freedom of order disappears.

- (45) Tenia un forat aquí  
 had-1s a hole here
- (46) L'altre dia menjaves xocolata  
 the-other day ate-2s chocolate

### 3. THE ACCOUNT

#### 3.1. THEORETICAL ASSUMPTIONS

Crucial to our account is the lack of direct evidence for constructions (8)-(15). This suggests that these constructions are the direct output of a mechanism that UG contains. As Roeper (1996) says, deviant structures in child speech are “direct evidence of UG in operation”.

The explanation of the structures presented rests on several assumptions that will be summarized in the following paragraphs, but before this let me make a few remarks with respect to pre-Minimalist proposals on language acquisition. Maturation accounts (Radford 1990; Guilfoyle and Noonan, 1988) are directly related to the account here presented, as the hypothesis that there is a prefunctional stage may very well be the Minimalist equivalent to a lack of Feature-checking requirements in the first stages of language acquisition. Conversely, Continuity accounts (e.g. Deprez and Pierce, 1993), which assume an adult-like complexity in structure from the onset, are direct counter-evidence to our proposal. Crucially some Continuity accounts of Catalan data analyse the speech of later stages (e.g. Bel, 1996), a fact that does not undermine the postulation of a pre-feature-checking stage. Underspecification proposals (Deprez, 1994; Radford, 1994) are related to our account only in the abstract; I postulate incomplete or unspecified lexical entries for lexical or substantive categories, not for functional categories which, I assume, are either not present or not activated in these early stages.

Several assumptions of the Minimalist Program (Chomsky, 1992, 1995) seem crucial to account for the data presented in section 2.1. The first observations are related to the following quote:

We assume that each lexical entry is of the form (P, S, F), where components of P serve only to yield *y* (phonological features), components of S serve only to yield *x* (semantic features), and components of F (formal features, e.g. the categorial features (+/-N, +/-V) may enter into computations but must be eliminated (at least by PF) for convergence. (Chomsky, 1995: 394).

The permissive character of the speech of children points towards a gradual acquisition of features. We make no strong claims as to the order in acquisition of these features, but it seems that a solid knowledge of S comes previous to F. Children play around with meaning of lexical items<sup>6</sup> before they learn the adult semantics corresponding to each lexical item. With respect to the acquisition of P, the mispronunciation of words in children’s speech is a well-known fact, and this also points to a gradual learning. My claim is that the S features of the verbs under analysis are present in the lexical entries of this early stage, and that some F features are already included (categorial selection)<sup>7</sup>, but that morphological features have not yet been acquired. Morphological features are part of the set of F; they are what determine Spec-head relations (Ns) and head-head adjunctions (Vs) in the complex structure of adult speech, but their absence necessarily brings with it freedom in order, omission, and agreement. Order and omission have been exemplified in our data ((8-15) and (19-23), respectively), and agreement errors are also present in the data in section 2. Crucially,

(4) has a 3ps marking with a 1ps interpretation. (See Capdevila, 1996 for a detailed account of the lack of AGRs and TNS in child Catalan and English, and for illustrative examples of errors of this sort). Our hypothesis is that either present, absent or inert, AGRs, TNS, and AGRo are not activated by the lexical items present in the speech of 20-22 month olds<sup>8</sup>.

The other important notion that the Minimalist Program puts forward and which is relevant for the account of the data in section 2 is the fact that there are Fundamental Operations. “One such operation is necessary on conceptual grounds alone: an operation that forms larger units out of those already constructed, call it Merge. Applied to two objects *x* and *y*, Merge forms a new object *z*.” (Chomsky, 1995: 396). Merge implies the assignment of a head status to one of the items involved in the operation. Roeper (1996) proposes that Merge should be decomposed for acquisition purposes into two operations, a more primitive form of conjunction, an Attach operation, which implies the adjunction of two elements without assigning a head status to either, and Merge which, he claims, involves the projection of the lexical subcategorization frame of an item. The data in section 2 seem to provide evidence for the accessibility of these two operations in child speech: predicate-less constructions (e.g. (25)-(27)) may be accounted for as a direct result of Attach, but misplaced argument structures ((8)-(15)) cannot be argued to be head-less constructions. Clearly one of the two items is the selecting head. Our claim will be that Merge, in this first stage does not yet include subcategorization requirements of order because the lexical items in question (verbs) do not include them.

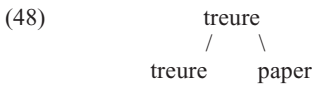
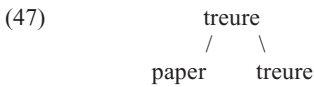
### 3.2. THE ACCOUNT OF THE PATTERNS IN (1)-(15)

The fact that the internal argument of some lexical verbs is freely placed pre or postverbally may be accounted for in different ways. We might say that the head-parameter is not fixed, or that there is a movement of the internal argument to a preverbal position, or that the preverbal argument is base-generated preverbally with an empty category in its postverbal position. I will dismiss the last of these options and postpone more detailed comments on the general lack of empty categories in child speech for the account of missing internal arguments (see below). I will also discard the second of these options (NP-obj movement) on the basis of a general lack of movement in child speech in this early stage. There is no direct evidence for movement, no *wh*-questions, and the negative structures that we find cannot coherently be taken as movement tests (à-la-Pollock (1989)) as the negative particle occurs post-clausally, not only postverbally (16), (25)-(27), (29)-(31). The presence of Root Infinitives (3. in section 2.1) and errors of tense - e.g. (6) and (14) are examples of a Subjunctive-3ps form used instead of the corresponding adult imperative - imply that V-to-T is not active. Moreover, agreement errors suggest a lack of Spec-head relations (See Capdevila, 1996 for errors detected by using Berko's technique). If there is no strong evidence for V-movement to AGR and for NP-subj to Spec-AGRs, it becomes theoretically even more difficult to argue for NP-obj movement. Note also that the absence of overt *C* directly suggests an absence of the *C*-system and thus only forcing the account could we claim there is NP to CP-Spec as an instance of topicalization. Crucially, the lack of different intonation for the structures in (8)-(15) suggests there is no topicalization involved. These structures, all in all, are equivalent to their V-obj pairs with a misplaced argument interpreted in the same way.

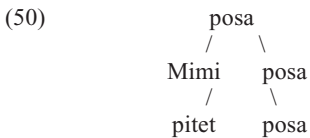
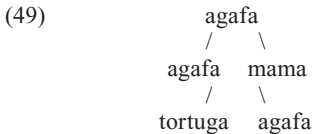


As regards the first of the options mentioned, namely an unfixed head parameter, some remarks are in order. Although the initial formulation of the head-parameter is by now out-of-date as parameters are associated with functional categories, it is not clear how the OV/VO orders must be captured in the grammar of each language. Within the functional parameterization hypothesis (Chomsky, 1988, 1995; Ouhalla, 1991) order of lexical categories is a consequence of the mediation of functional categories, so OV and VO surface orders can be base-generated or derived. Moreover, in a Minimalist framework in which case features are checked in Spec-positions, objects move (overtly or covertly) to Spec-AGRo. Despite all these possibilities of accounting for word order in language, and assuming there is an established position for objects of verbs in each language, we assume that this information must be included in the lexical entries of verbs if there is no independent X-bar cross-categorical parameter<sup>9</sup>. We, thus claim that order is a feature of the lexical entry of verbs, one of the set of F features which enter into computation. Lexical entries at this stage contain S and P features, but not (or not all) F features.

The Fundamental Operation of Merge applies to two underspecified or incomplete lexical entries and is not subject to any order restrictions. It may form either of the two possible structures<sup>10</sup>:



The examples with more than two lexical items indicate that Merge may reapply, putting together a Verb-internal argument constituent with another word. In (49) and (50) the external argument and the internal argument co-occur with the lexical verb that selects them and acts as the head, independently of the order of the arguments:



These constructions are counter-evidence to Radford's (1990) account of the misplaced internal arguments reported in Bowerman (1973).

- (51) Doggie sew  
 Kimmy kick  
 Kendall pick-up  
 Doggie look-it  
 (Radford 1990: 232, ex. (41))

Radford analyses these constructions as instances of internal arguments occupying the subject position which is left available by the missing external argument assuming that there is lexical saturation of thematic roles. In other words, the syntactic position of an argument is not projected in the syntax if not overt because child grammar allows for a lexical saturation process. Crucially, in Radford's data there are no instances of Subj+Obj+Verb constructions, but our data include them (16)-(18), (49)-(50) and thus, our account must necessarily involve a different explanation.

Nevertheless, Radford (1990) argues for a lack of empty categories in child speech, which seems appealing to the general notion of economy in the Minimalist Program framework. The lexical saturation process that Radford (1990) alludes to in his account of Obj-V constructions is also basic to his account of missing objects, and contrasts with other proposals for missing internal arguments in child speech (e.g. De Haan and Tuijman, 1988; Sano and Hyams, 1994). If there is lexical saturation and no syntactic projection, there is no need for empty categories and no processes of syntactic licensing. Sano and Hyams (1994) refer to the low proportion of null objects in child speech as an argument for postulating a different nature with respect to missing external arguments. These null objects are empty categories bound by a null topic. De Haan and Tuijman (1988) also account for null objects as variables bound by a null topic, as is common in other accounts of empty objects. The identification of these empty objects is provided by discourse. It is true that pragmatic context constrains the occurrence of these empty internal arguments, exs. (19)-(23) all involve internal arguments which are present. There are no instances of null objects which are not pragmatically recoverable. Whichever mechanism accounts for the possibility of pragmatics to interact with syntactic structure seems to be accessible in child Catalan but is lost as from 24 months, when Feature-checking is activated<sup>11</sup>.

There is another type of syntactic 'gap' in early child speech<sup>12</sup> which could be analysed either as containing an empty category or as a result of a direct conjunction of items with no syntactic projection of the unrealized element. The predicate-less constructions in (25)-(27) are accounted for if we posit that Attach<sup>13</sup> applies to the two arguments, and Merge applies to negation and the attached constituent:

- (52)
- |      |        |
|------|--------|
| no   | / \    |
| x    | no     |
| / \  |        |
| Mimi | vestit |

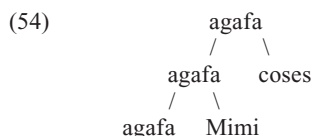
Radford's (1990) binominal structures could also be accounted for in the same fashion. The following are all instances of productions of English children at 21 months:

- (53) Mommy sock  
 Mommy diaper

Mommy shoe  
 Wendy cottage cheese  
 (exs. from Radford, 1990: 192)

The mobility of the negative particle in early speech has been extensively studied. With respect to Catalan, Bel (1996) alludes to a double parametric option to account for pre and postverbal negation. The negation parameter is fixed when tense is acquired. Although, as noted, this is a Continuity approach, it does not seem to undermine the proposal in this article as our data confirm that when tense is acquired (around 23 months, see (45)-(46) imperfect tense examples) freedom of order is lost.

The lack of ordering restrictions may also account for structures such as (24), where the internal argument of the lexical verb is separated from the selecting head by the external argument. Adjacency is obviously not relevant for case assignment as it follows from our proposal that Case-checking has not been activated yet.



## Notes

- \* The research reported here was partially supported by the following grants from the following institutions: DGICYT (PB93-0893C04-02) and CIRIT (1995SGR/00486; XT-94-48).
1. This journal plus several hours of video-recording of the same child are in the process of being transcribed and codified in the CHILDES (MacWhinney, 1991) system.
  2. Mimi is the name Mireia uses to refer to herself.
  3. There are many other verbs for which we can find at least one instance of each of the orders these verbs include: TIRAR (= to throw), NETEJAR (= to clean), TENIR (= to have), MENJAR (= to eat), TRUCAR (= to telephone).
  4. The ending of this verb is like the adult form in Catalan:
    - (i) Posa'm això  
 put-IMP-clitic  
 'Put this on me' (= dress me up with this)  
 I will not take this (almost unique) production of a clitic-like ending to be an instance of a clitic given the general lack of clitics at this stage.
  5. I will not account for these different deviant structures, but only note that interaction with a question suggests a possibly different structure.
  6. As an instance of this, Mireia used the verb OBRIR (= to open) to mean different things (open, turn (a page), unbutton, undo, unzip, etc.) at 17-18 months.
  7. Unless categorial selection follows from s-selection (Canonical Structural Realization) and then these types of categorial features are redundant. It is clear, though, that all productions of a verb with a complement are categorially correct (no V+PP, V+AP if V selects NP).
  8. More precisely, in the pre-Feature-checking stage of each child. Obviously, it need not correspond to 20-22 months.

9. Another extreme proposal would be to do away with ordering constraints in lexical entries of lexical categories altogether and make functional categories responsible for all word order restrictions in language.
10. The trees in this article follow Chomsky's (1995) labels. X-bar is done away with in favour of heads projecting, but relations of complements and specifiers are maintained. It seems to me that this structure captures child speech at this stage much more straightforwardly than X-bar trees.
11. Nevertheless, this mechanism is not completely lost as there are some contexts in which pragmatics may override syntax and leave internal arguments unrealized.
12. As in note 11, there are contexts in adult speech where a predicate may be left out, especially in exclamations: "Jo això?, mai!" (= Me this, never!).
13. Coordinate structures without a coordinating particle, which are present in our data are also explained by Attach:
  - (i) Respall papa mama (= Toothbrush dad mom)

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